NATIONAL HEALTH POLICY FORUM

Got Junk?

The Federal Role in Regulating "Competitive" Foods

ISSUE BRIEF
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OVERVIEW — *A wide variety of food and beverage items are available in schools in addition to the school meals provided through the National School Lunch Program and School Breakfast Program. A long-standing source of controversy, the need for stronger federal restrictions on foods that compete with school meals is again under debate. This issue brief examines the availability and consumption of competitive foods, explores the regulation of these foods at the federal level, considers trends in state and local restrictions, and summarizes perceived barriers to improving the nutritional quality of competitive food options.*

RELATED MATERIALS — *For additional information on the National School Lunch and School Breakfast Programs, see the companion paper, "No Free Lunch? Current Challenges Facing the National School Lunch and School Breakfast Programs" (Background Paper No. 72, December 11, 2009).*

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As the prevalence of childhood obesity reaches unprecedented proportions, Congress is currently reassessing federal child nutrition policies and revisiting the role of schools in promoting student wellness. Policy discussions have included not only the existing National School Lunch and School Breakfast Programs, but also "competitive" foods sold alongside school meals. By definition, competitive foods represent all the food and beverage items available to children in school that are not part of the school meals that meet nutrition standards promulgated by the U.S. Department of Agriculture (USDA) and qualify for federal reimbursement. The influence of competitive foods on children's health, as well as on the reach and effectiveness of the school meal programs, has been a source of controversy for decades.

When Congress last reauthorized federal child nutrition programs five years ago,[1] the enacted legislation sought to encourage increased oversight of competitive foods by state and local authorities. Recognizing that schools have the potential to play a broad role in shaping child wellness, the Child Nutrition and WIC Reauthorization Act of 2004[2] required all school districts participating in the school meal programs (virtually all districts in the country) to establish local school wellness policies by the start of the 2006–2007 school year. The law mandated that these policies should establish nutrition standards for all food and beverages available in schools and set goals for nutrition education, physical activity, and other school-based activities designed to promote student wellness. The legislation did not prescribe the content of local wellness policies, and national mechanisms were not established for reviewing policies enacted or evaluating progress toward implementation. However, districts are required to develop their own plan for monitoring implementation.

The need for a stronger federal role in regulating competitive foods has once again emerged as a hot topic for legislative debate as Congress moves to reauthorize the child nutrition programs which expired on September 30, 2009. Bills have been introduced in both the U.S. House of Representatives and the U.S. Senate to significantly expand federal oversight over competitive foods which are widely available to students across the country. A national study of school food

environments conducted during the latter half of the 2004–2005 school year found that competitive foods are available in all high schools, nearly all middle schools (97 percent), and most elementary schools (80 percent).[3] The sale of competitive foods represents an important revenue source for schools, generating over $2 billion in funding each year.[4]

Pressure to restrict competitive foods appears to be building. Many parents and nutrition advocates strongly believe that unhealthy "junk" food sold in schools undermines childhood nutrition, encourages poor life-long eating habits, and contributes to rising obesity rates. While the need to improve the nutritional quality of school meals has been raised, the most vocal criticism has focused on competitive foods. In response to these concerns, as well as the federal mandate for local wellness policies, many states and local school districts have recently enacted stronger restrictions on schools to limit items offered in addition to school meals.

The effect of competitive foods on childhood obesity and the need for more rigorous federal standards to ensure school environments promote student wellness are both contested. Given policy activity at the state and local level, some policymakers question the need for, or feasibility of, additional federal intervention. Others remain concerned that, despite progress made, too many schools continue to offer unhealthy options that compete with and displace nutritious school meals. Proponents of increased federal involvement believe that federal standards for competitive foods are needed to both protect children's health and to promote the effectiveness of the $11.7 billion invested by the federal government in the National School Lunch and School Breakfast Programs in 2008.[5] This issue brief examines the controversy surrounding competitive foods and considers the factors likely to influence future legislative activity.

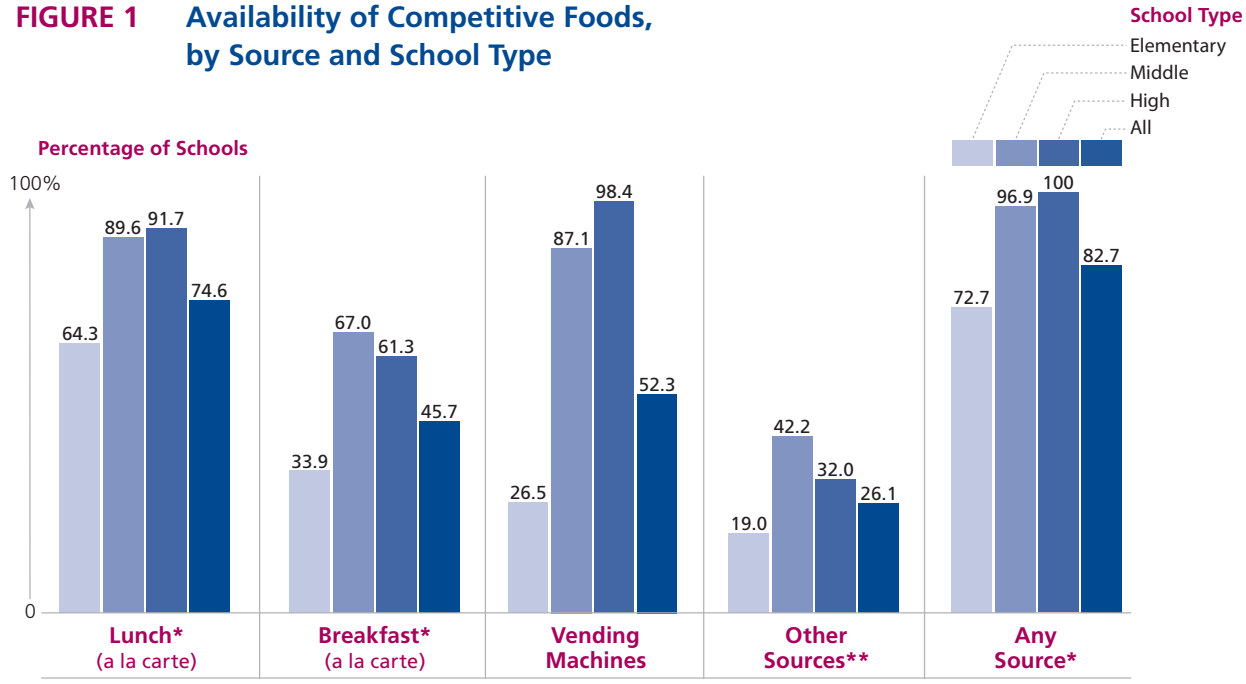
AVAILABILITY AND CONSUMPTION OF COMPETITIVE FOODS

School districts and individual schools generally have tremendous discretion in determining what competitive foods will be made available in schools, when these food and beverage items will be offered, and where they will be distributed. This flexibility has resulted in a school food environment that varies widely. Some schools may ban all competitive foods and provide only school meals that meet federal standards under the National School Lunch and School Breakfast Programs. For some other schools, à la carte milk may be offered as a

convenience for students that bring lunch from home and may be the sole competitive food available. Other schools may maintain vending machines, located across the hallway from the school cafeteria, that sell soda and candy throughout the school day. Still others might limit vending machine options to water, 100 percent fruit juice, and fresh produce. Although this diversity is difficult to fully characterize, some norms and patterns have been established by the *School Nutrition and Dietary Assessment-III*, a nationally representative survey of school meal programs and student dietary habits conducted in the 2004–2005 school year and sponsored by USDA.

Sources of competitive foods include vending machines, school stores and snack bars, classroom parties, rewards from teachers, and fund-raising events, as well as à la carte options sold in cafeterias alongside reimbursable school meals. À la carte options at lunch are the most common source of competitive foods across all grade levels. Vending and other competitive food sources outside the food service area are less common in elementary schools, but can be found in the vast majority of middle and high schools, as shown in Figure 1.

FIGURE 1 **Availability of Competitive Foods, by Source and School Type**



* *Excludes schools that offer milk as the only a la carte item.*

** *Includes school stores, snack bars, food carts outside of cafeteria, and fund raising concessions, but excludes classroom parties and teacher rewards.*

Source: Mary Kay Fox et al., *"Availability and Consumption of Competitive Foods in US Public Schools,"* Journal of the American Dietetic Association, *109, no. 2, suppl. 1 (February 2009): p. S61.*

Although healthy and less nutritious competitive food options are both widely available, high-sugar, high-fat, energy-dense choices tend to dominate in the frequency and variety of items offered. Table 1 provides examples of the kinds of competitive foods typically

TABLE 1 | Examples of Competitive Foods Available in Schools, by School Type and Source of Food

		PERCENTAGE OF SCHOOLS			
SOURCE	**COMPETITIVE FOODS**	**Elementary Schools**	**Middle Schools**	**High Schools**	**All Schools**
Items offered a la carte at lunch	Milk	65.6%	70.2%	84.5%	70.2%
	Water	25.7	57.3	58.3	38.2
	Juice *(100%)*	36.5	52.5	54.0	43.0
	Other beverages *(e.g, soda, juice drinks, sports drinks)*	23.8	61.6	57.5	37.7
	Sweet Baked Goods	27.5	65.4	57.6	40.8
	Candy	2.6	5.6	19.2	6.4
	Snack Foods *(chips, nuts, energy bars)*	32.5	61.4	54.1	42.3
	Yogurt	10.6	19.7	17.6	13.7
	Frozen Desserts	26.9	52.9	40.7	34.7
	Fruit	21.7	40.6	43.6	29.7
	Meat Entrees *(hamburgers, cold cuts, chicken patties)*	20.4	46.9	44.4	30.2
	Fried Potatoes	13.6	35.9	40.1	23.1
	Salad	14.1	30.7	32.8	21.0
	Cooked Vegetables	15.4	20.4	23.0	17.9
Items offered in vending machines	Water	16.4	64.7	76.7	37.4
	Juice *(100%)*	12.2	24.0	57.4	23.3
	Other beverages *(e.g, soda, juice drinks, sports drinks)*	17.4	74.8	95.2	43.6
	Sweet Baked Goods	0	33.7	52.2	16.6
	Candy & Snack Foods	0	33.5	59.5	18.0
	Fruits / Vegetables	0	12.1	9.7	4.2

Source: USDA, School Nutrition Dietary Assessment Study III—Volume I: School Foodservice, School Food Environment, and Meals Offered and Served*, November 2007, pp. 104–105 and pp. 109–110; available at* www.fns.usda.gov/ORA/menu/Published/CNP/cnp.htm.

available in schools and the percentage of schools that offer these foods. The availability of both healthy and unhealthy competitive choices increases with grade level, with high schools having the broadest selection of options.

Not surprisingly, more secondary school students consume competitive foods relative to elementary school students, consistent with the increased availability of competitive food choices. Approximately 40 percent of all children consume one or more competitive foods on a typical day, including 29 percent of elementary school students, 43 percent of middle school students, and 54 percent of high school students.[6]

Low-nutrient/energy-dense competitive food options are more likely to be selected by students than healthier offerings. Dessert and snack items and beverages other than milk or 100 percent juice are the most commonly consumed competitive foods.[7] Approximately 53 percent of children who select one or more competitive foods choose a dessert or snack item (such as cookies, candy, or chips), 46 percent choose a beverage other than milk or 100 percent juice (such as carbonated soda), 6 percent choose milk (about half of whom choose a flavored milk), 7 percent choose fruit or 100 percent juice, and 5 percent choose a vegetable.[8]

Competitive foods are most often consumed during lunch. About 80 percent of all children who consume competitive food during the school day eat such food during lunch time. For elementary and middle school students, the source of competitive foods consumed was about evenly split between the school cafeteria and other sources that do not offer reimbursable school meals (such as vending machines). High school students obtained competitive foods from the school cafeteria at about the same rate as middle or elementary school students, but they were also much more likely to consume competitive foods from sources where meals are not available. This finding is not surprising given the greater availability of vending machines, snack bars, and other foods sources in high schools.

INFLUENCE OF COMPETITIVE FOODS ON OBESITY AND NUTRITIONAL STATUS

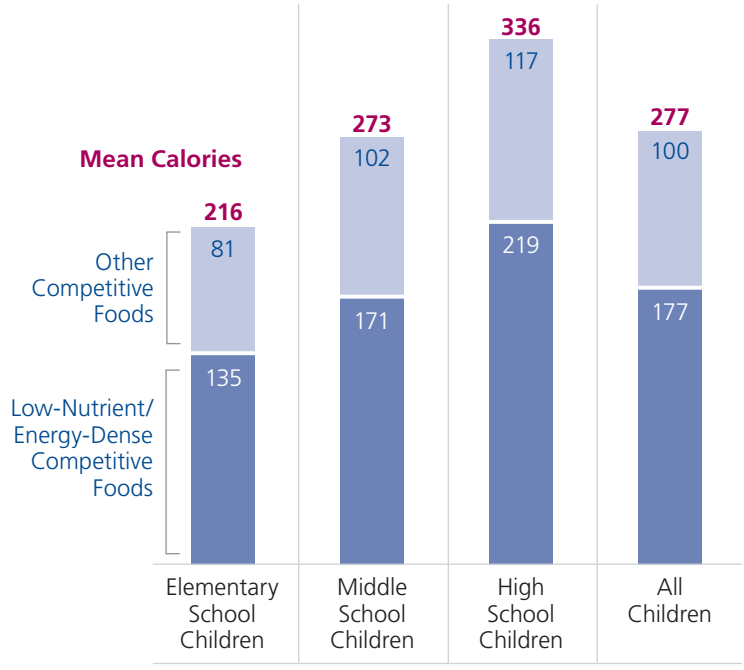
While both physical activity and dietary habits clearly influence weight management for individual children and adults, recent research

suggests that increased food consumption is the primary driver of the obesity epidemic in the United States. The observed increase in the average weight of both children and adults over the past 30 years can be attributed entirely to the documented increase in average caloric consumption that occurred between 1970 and 2000.[9] The average American child would need to cut their food intake by 350 calories per day, or increase moderate physical activity by 150 minutes per day, to return to the average weight observed in 1970 when less than 5 percent of children were obese.[10]

To what extent do competitive foods factor into observed trends in overconsumption? The existing evidence base has not established a clear causal relationship between any particular food or food source and childhood obesity. However, epidemiological studies demonstrate that increased consumption of certain types of food products commonly sold as competitive foods, such as sweetened soda, correlates strongly with weight gain and obesity in children.[11] While overconsumption of any food will cause weight gain, these foods are frequently over-consumed.

Most competitive foods provide little nutritional benefit, and consumption of these foods contributes to excess caloric intake. Researchers estimate that the competitive foods obtained in schools add an average of 277 calories per day to the diets of children who consume one or more of these foods (Figure 2). Approximately two-thirds of those calories are derived from low-nutrient/energy-dense foods (177 calories).[12] For all children (including those who do not eat competitive foods), low-nutrient/energy-dense competitive foods account for an average of 89 calories daily.[13] Although low-nutrient/energy-dense competitive foods represent less than 5 percent of total daily

FIGURE 2 **Averaged Calories Obtained from Competitive Foods Among U.S. Public School Students***
(2004-2005 School Year)



*Based on children who consumed competitive foods from weighted data from the third School Nutrition Dietary Assessment Study.

Source: Mary Kay Fox et al., *"Availability and Consumption of Competitive Foods in US Public Schools,"* Journal of the American Dietetic Association, *109, no. 2, suppl. 1 (February 2009): p. S64.*

consumption, these foods account for roughly one-fifth of all low-nutrient/energy-dense food consumed by school-age children. The calories provided by low-nutrient competitive food equal more than one-quarter of the caloric reduction needed to reverse the childhood obesity epidemic.

In addition, USDA believes that competitive foods undermine the nutritional integrity of school meals and discourage students from participating in the school meal programs.[14] As competitive offerings increase, rates of participation in school meals decline. Students who do not eat reimbursable school meals are significantly more likely to consume competitive foods than those who do participate in the meal programs. On a given day, about 36 percent of students who eat the meals provided by the National School Lunch and School Breakfast Programs consume competitive foods compared with 45 percent of those who do not.[15] Among students who do consume competitive foods, meal program participants tend to eat less of these foods than non-participants.[16] However, low-nutrient foods represent a higher proportion of the competitive foods consumed by participants (70 percent), compared with non-participants (50 percent). This difference appears related to the fact that the competitive foods consumed by non-participants are more likely to include à la carte entrée items eaten in place of the reimbursable school meal.[17]

FEDERAL STANDARDS FOR COMPETITIVE FOODS

Current federal rules place few limits on the sale of competitive foods in schools. Existing USDA regulations prohibit the sale of specific "foods of minimal nutritional value" (see text box, next page) in the food service area during mealtimes. Such foods include soda, water ices not made with real fruit or juice, chewing gum, and certain candies. Consistent with this ban, these restricted foods are not often found in school food service lines during mealtimes, but they may be available through vending machines in or near the cafeteria.

Federal policy on competitive foods has changed numerous times since 1970, when Congress first directed USDA to define and regulate competitive foods (primarily in response to concerns about tooth decay).[18] Early regulations effectively banned from the cafeteria during mealtimes all foods not offered as part of the meal or as an à la carte choice. Subsequent pressure from food and beverage industries regarding these restrictions led Congress to strip USDA of regulatory

authority over competitive foods in 1972. Congress reversed itself again in 1977 and restored regulatory authority to USDA, and regulations implementing this restored authority were issued in 1980 after a contentious rule-making process. These regulations prohibited the sale of foods of minimal nutritional value anywhere on school grounds until the end of the last lunch period. The National Soft Drink Association and others challenged this restriction in court. The District of Columbia Federal Court of Appeals struck the rule down in 1983, finding that USDA had overstepped its authority in regulating the sale of foods outside the food service area and outside of mealtimes. In response to the court ruling, USDA established the existing regulatory framework, which essentially reflects the status of restrictions first imposed in 1970.

Congress has continued to grapple with the appropriate regulatory role of USDA with respect to competitive foods. Despite the lull in legislative action, Congressional debate on the issue has not abated over the last 20 years. In the 111th Congress, bills have been introduced in both the House and Senate (S. 934 and H.R. 1324) to increase federal restrictions on competitive foods. These identical bills charge USDA with identifying science-based standards for all food and beverages available in schools at any time during the school day and promulgating regulations to implement these standards. The bills do not specify penalties for schools that fail to adhere to the federal standards to be promulgated by USDA.

Science-based standards for competitive foods have been established by an expert advisory panel. A 2007 Institute of Medicine (IOM) study designed to support the development of local school wellness policies recommended that reimbursable school meals should be the main source of nutrition offered at schools and that opportunities for competitive foods should be limited.[19] If competitive foods are made available, the IOM recommends that these foods should consist of fruits, vegetables, whole grains, and nonfat or low-fat dairy products, consistent with the 2005 *Dietary Guidelines for Americans*. Dairy products and

Categories of Competitive Food

USDA identifies two types of competitive foods:

Foods of Minimal Nutritional Value (FMNV) are specifically identified in USDA regulations and are limited to soda, chewing gum, and certain candies made predominantly with sweeteners (hard candy, jellies and gums, marshmallows, fondant, licorice, spun candy, and candy coated popcorn).

Other Competitive Food includes all foods offered in school outside the school meal that are not identified in the definition for FMNV.

Low-Nutrient/Energy-Dense Competitive Food is a term often used by nutrition experts, but this terminology is not used in USDA regulations. No standardized definition exists for this term, but it is generally used to describe a more inclusive category of competitive foods than FMNV and typically includes all candy, cakes/cookies/brownies and other baked desserts, pies, muffins, donuts, sweet rolls, toaster pastries, frozen desserts, snack chips (including corn/tortilla chips), french fries, and caloric beverages other than milk or 100 percent juice.

other items that are not fruits, vegetables, or whole grains should be limited to 200 calories per portion and should contain no more than 35 percent of total calories from fat, less than 10 percent of total calories from saturated fats, zero *trans* fat, 35 percent or less of calories from total sugar, and sodium content of 200 mg or less per portion.

Although not required, these standards are reflected in voluntary programs sponsored by USDA. The competitive food standards USDA has established for schools seeking a "Gold Award of Distinction" under the Department's HealthierUS Schools Challenge are generally consistent with IOM recommendations. The Challenge acknowledges schools that demonstrate superior performance in creating healthier school environments. No school currently holds the Distinction award, but approximately 600 schools have received either a Bronze, Silver, or Gold award. These award levels place similar restrictions on competitive foods, with the exception of sodium content requirements which are more relaxed than the Distinction award.

STATE AND LOCAL RESTRICTIONS ON COMPETITIVE FOODS

Those opposed to additional federally mandated restrictions on competitive foods stress the importance of allowing state and local officials to establish policies that best meet the needs of their students and schools. Critics of increased federal intervention believe that the local school wellness policies (mandated in 2004 and implemented in 2006) ensure that local school districts address competitive foods while allowing local authorities to balance student needs, fiscal concerns, and food service capacity constraints in the manner most appropriate for their community.

The federal mandate for local school wellness policies appears to have influenced the development of competitive food standards, but the effect of these local standards is difficult to assess. A survey conducted by the School Nutrition Association (SNA) in 2007 indicates that the proportion of school districts establishing nutrition policies for competitive foods increased substantially after the enactment of the federal mandate and that the majority of districts have some kind of written policy in place.[20] However, the strength and specificity of these policies appears to vary significantly across local school districts.

A national assessment of local school wellness policies found that relatively few students are enrolled in districts with strong policies

regarding competitive foods. The Robert Wood Johnson Foundation–sponsored study was conducted by Bridging the Gap (a research program at University of Illinois at Chicago) and reviewed the written school wellness policies of a nationally representative sample of 641 school districts across the country at the beginning of the 2007–2008 school year. The assessment determined that a minority of students are enrolled in districts with strong competitive food policies that are both mandatory in nature (implementation by schools required rather than recommended or encouraged) and well-defined (specific requirements articulated).

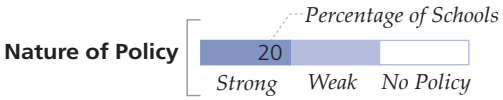
The prevalence of strong competitive foods policies varied in terms of level of school, as well as type of policy (Figure 3, next page). For example, policies that limit student access to vending machines during the school day are among the most common type of competitive food policy established at the local level. Yet only 50 percent of elementary school students, 29 percent of middle school students, and 23 percent of high school students are enrolled in districts with strong policies that restrict access to competitive foods sold through vending machines. (The assessment defined strong vending policies as those that ban competitive foods from any source, ban vending machines, or require vending options to comply with specific nutritional standards regarding fat, calorie, and sugar content.) Strong restrictions related to classroom parties and teacher rewards were rarely observed, with only 6 percent and 8 percent of elementary school students enrolled in districts with strong policies in each of these respective areas.

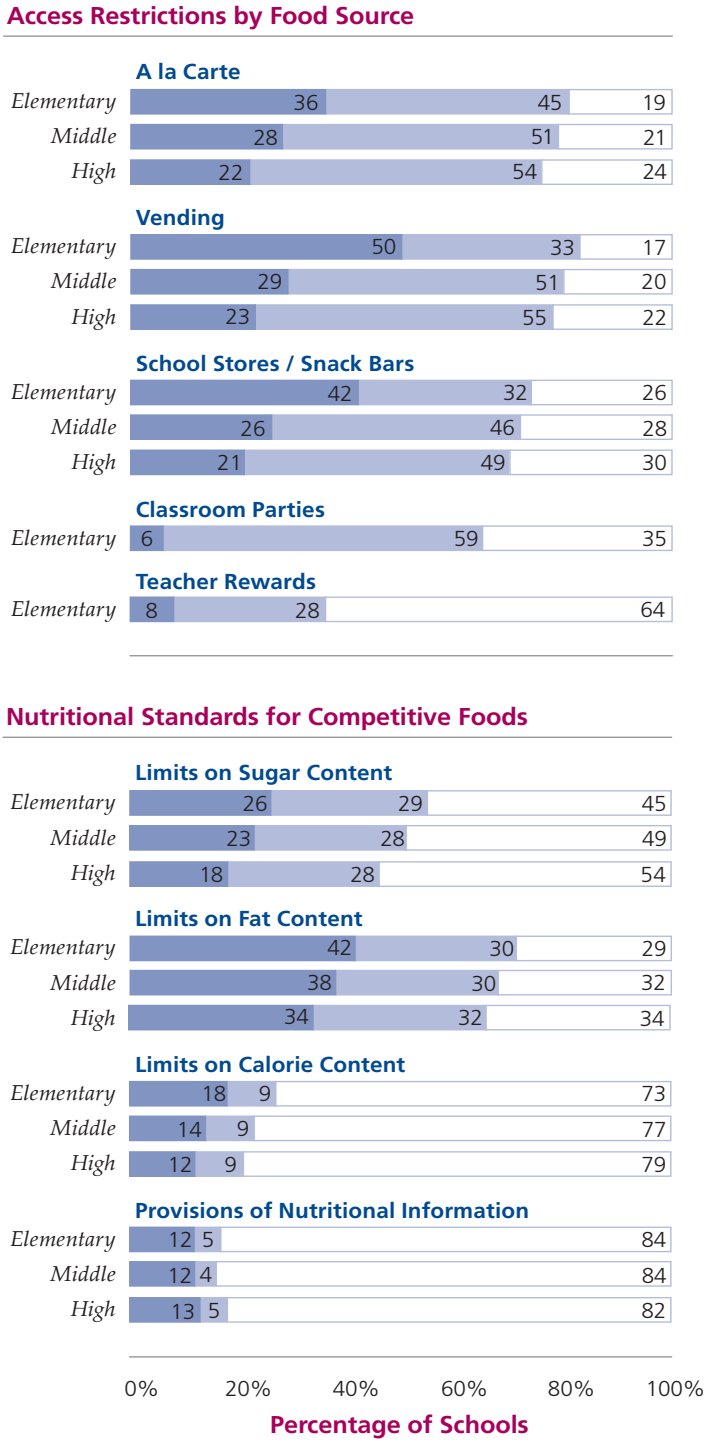
Researchers noted great variation in policies that address the nutritional content of competitive foods. Limits on fat content were the most commonly observed. Yet approximately one-third of students were enrolled in school districts that had no written policies on fat content. Over 80 percent of students were enrolled in districts that neither required nor recommended that students be informed of the nutritional content of competitive foods.

Sometimes, state law shapes the competitive food policies of local school districts. At least 39 states have enacted statutes or regulations that address competitive foods in schools. Many of these policies were established after the federal mandate was imposed. The nature of these state policies varies widely, however.

Some policies merely codify the federal mandate in state law, and others establish recommended guidelines for school districts. Some

FIGURE 3 Implementation of Local Competitive Foods Policies (as of September 2007)





Note: Due to rounding, some bars do not add up to 100 percent.

Source: Jamie Chriqui et al., *"Local Wellness Policies: Assessing School District Strategies for Improving Children's Health. School Years 2006-07 and 2007-08," Bridging the Gap, Institute for Health Research and Policy, University of Illinois at Chicago, 2009; available at* www.bridgingthegapresearch.org/client_files/pdfs/monograph.pdf.

states extend the existing federal ban on foods of minimal nutritional value beyond mealtimes or beyond the food service areas of the school campus. A few states place additional limits only on particular types of competitive foods, such as sweetened carbonated beverages, while others mandate that healthy alternatives are made available alongside low-nutrient options.

At least 11 states[21] have enacted comprehensive policies regarding competitive foods that either place full or partial bans on such foods or establish detailed nutritional restrictions for competitive offerings. For example, both Hawaii and Texas have established bans on the sale of competitive foods. Hawaii bans competitive foods from all elementary and secondary schools, with certain exceptions approved by the state's Department of Education. Texas completely bans competitive foods only in elementary schools, but bans all such sales in middle schools during mealtimes and in high schools during mealtimes in the food service area.

Some states, such as California, Oregon, and Rhode Island, have established detailed nutritional standards for all competitive foods available in the school which generally reflect the IOM standards. Connecticut has created a payment incentive for schools that voluntarily agree to restrictions on competitive foods that are consistent with the IOM standards. These certified schools receive state funding equaling 10 cents for every reimbursable school meal served the prior academic year, creating incentives for schools to both offer more nutritious competitive foods and promote participation in the school meal program.

Given the broad range of approaches pursued and the general reliance on recommended rather than required standards, the effect of wellness policies implemented in the 2006–2007 school year on the availability and consumption of competitive foods is unclear. The most recent nationally representative data on competitive food offerings and intake (presented earlier in this paper) reflect the latter half of the 2004–2005 school year, over one year before local wellness policies were implemented. A survey conducted by the Centers for Disease Control and Prevention (CDC) in 2006 suggests that most school districts have not completely banned low-nutrient, competitive foods, but many (nearly 40 percent) do prohibit à la carte offerings of such foods at lunch or breakfast.[22] The proportion of schools banning low-nutrient foods has increased significantly since 2000,

suggesting a possible link to the local school district wellness policies developed under the federal mandate.

A number of well-publicized, voluntary efforts by the food and beverage industry have also improved the nutritional quality of competitive foods, and these initiatives have facilitated public policy changes at the state and school district level. For example, the Alliance for a Healthier Generation has brokered agreements with a variety of participating companies (such as PepsiCo, Coca Cola, and Kraft) to establish voluntary guidelines for snack foods and carbonated beverages sold in schools. Beverage guidelines (for all beverages other than water, milk, and 100 percent fruit juice) prohibit distribution of products with more than 66 calories per 8 ounce serving in elementary and middle schools. Guidelines for snack foods set limits on calories per portion and sugar, fat, and sodium content, and prohibit *trans* fat. The beverage industry reports significant progress in the implementation of beverage guidelines, indicating that 79 percent of contracts between bottlers and schools comply with guidelines and that the total calories contained in beverages shipped to schools has been reduced by 58 percent.[23]

Schools appear more able to comply with nutritional restrictions on beverages than with restrictions on food products. A study in California demonstrated that, after the state mandated nutritional requirements for competitive foods, nearly 90 percent of schools offering such products[24] fully adhered to the beverage standard and none fully adhered to the standard for food.[25] Researchers speculate that important differences between the two types of state-mandated standards may be driving the observed compliance rates. Beverage standards identified specific products that could and could not be sold, whereas food standards were based on specifications for nutritional content (similar to the IOM recommendation). Higher rates of compliance with the food standard were noted in the food service area of schools (as opposed to vending machines and school stores), which may be due to food service managers' experience and training in conducting nutritional analyses.

BARRIERS TO HEALTHIER COMPETITIVE FOOD OPTIONS

Many schools struggle to limit low-nutrient competitive foods and improve the availability of healthy options. School administrators and

food service managers often refer to the "trilemma" they face in trying to balance nutrition, program costs, and student preferences. Many schools report that revenues generated by the low-nutrient, competitive foods favored by students help to fund their overall food service programs and, in some cases, their broader school budgets. A survey conducted by SNA found that 78 percent of food service managers rely on competitive foods to supplement their food service budgets.[26]

Student Preferences

Revenues are dependent on student selection and purchases. Food service managers often express skepticism that students' appetite for healthy food and beverage options will equal demand for low-nutrient competitive foods. However, the experiences of model programs profiled by USDA suggest that student preferences are fairly adaptable to available food choices.[27] Low-nutrient competitive foods appear to displace more nutritious choices, and limiting their availability often results in increased consumption of healthier foods.

The experiences of model programs suggest that the extent to which children will choose and consume healthy foods depends on several factors. Conditions most conducive to healthy choices include a wide variety of healthy food alternatives, limited options for low-nutrient foods, nutrition education to reinforce the benefits of a healthy diet, and appealing presentation and placement of nutritious offerings. Other factors in school food service environments (such as the amount of time allotted for meals, the adequacy of seating and table space in the cafeteria, and the timing of meals relative to recess and other opportunities for physical activity), also influence children's willingness to eat healthy foods.[28]

Nutrition advocates are concerned that competitive foods play a strong role in shaping students' current and future food preferences. The provision of competitive foods in schools may suggest to students that these are desirable food choices and could contradict healthy eating messages conveyed through nutrition education. Food and beverages that are aggressively marketed through "pouring rights" agreements and other exclusive marketing contracts between schools and food distributors are viewed as particularly problematic. Distributors favor such agreements because these marketing efforts are believed to establish brand loyalty in young children who may become life-long customers.

Some critics of restrictions on competitive foods in schools contend that students, particularly older high school students, need to develop responsible decision-making skills and should be allowed to practice these choices in the relatively controlled food environment provided by schools. Nearly 25 percent of high schools have open campus policies (which permit students to leave school grounds during lunch), and about 75 percent of these schools are close enough to a fast food restaurant to allow students to walk or drive to these locations during lunch.[29] Therefore, restricting competitive food choices within the school may only encourage students to leave the school campus at mealtimes.

California's efforts to limit the availability of low-nutrient competitive foods offer some evidence to refute this concern. A recent evaluation of the state's nutritional standards for foods offered in schools found that both on- and off-campus purchases of competitive foods decreased during the school day after restrictions were imposed, although on-campus purchases declined more substantially. "At home" consumption of chips and soda did increase slightly (less than 1 percent), but reductions in the "at school" consumption of these products were significantly higher, resulting in an overall decrease in unhealthy eating.[30] However, it is unclear whether these findings have been replicated in, or can be generalized to, other states.

Fiscal Constraints

Competitive foods and beverages generate an estimated $2.3 billion in revenue for schools annually.[31] These revenues include sales from à la carte items in the school cafeteria, vending machines, and other sales venues within schools, as well as revenues generated through "pouring rights" agreements that can provide significant levels of financial compensation for schools. However, the majority of revenues for competitive foods appear to come from à la carte offerings, and these revenues typically accrue to the food service program. Sales from other competitive food sources (such as vending machines) and pouring rights payments usually benefit broader school functions and are often viewed as an important source of flexible funding to finance discretionary activities like student field trips, assemblies, and athletic equipment.[32]

Revenue from competitive foods represents approximately 16 percent of total funding for the average district food service program.[33]

However, some districts vary significantly from this norm, as nearly 15 percent of all district food service programs derive 30 percent or more of total funding from competitive foods.[34] Reliance on revenue from competitive foods appears somewhat heavier in districts with relatively few students qualifying for free and reduced-price lunches.[35]

Efforts to improve the nutritional quality of competitive foods have yielded encouraging, but inconclusive, results regarding the financial impact of these changes.[36] A number of studies have documented cases of schools and districts that restricted low-nutrient foods and increased healthy offerings without suffering negative financial consequences. These model programs often saw revenues increase, or remain the same, as participation in the school meals program increased (presumably due to decreased availability of less healthy competitive alternatives). However, fewer studies have examined the impact of such changes on net income. Factoring in the differential costs associated with these interventions is challenging because many schools are unable to accurately supply this type of information.

School food service managers have expressed concerns that healthy food choices—both nutritious school meals and healthier competitive food options—are more expensive to prepare and serve than low-nutrient competitive options. Low-nutrient foods are often commercially processed and purchased by schools from vendors in ready-to-serve packaging. In contrast, healthier foods tend to rely on fresh ingredients that must be stored in refrigerated space prior to preparation and may need to be integrated into recipes on-site by trained food service staff. These requirements add to program costs through increased equipment expenses and, perhaps more significantly, increased labor costs which include hourly compensation, fringe benefits, and sometimes training costs.

Studies that have successfully integrated both cost and revenue analyses into financial assessments of competitive food restrictions found inconsistent experiences across schools. Some schools lost income, others gained income, and others experienced no change. These findings led the IOM to conclude that increased restrictions on competitive foods have the potential to cause loss of income for schools and more information is needed to clarify the factors that contribute to (and protect against) negative fiscal repercussions.

CONCLUSION

As Congress considers the need to establish more stringent federal standards for competitive foods, policymakers will be asked to balance a number of compelling issues. Arguments against increased federal involvement include the possible financial risks to schools, state and local prerogatives, and the legitimate commercial interests of the food and beverage industries. These concerns will be weighed against the threat competitive foods pose to children's health, the magnitude of which will be evaluated in both humanitarian and financial terms. The fiscal implications of competitive foods include the immediate influence of these foods on federal investments in the school meal programs, as well as the potential for future increases in health care spending due to obesity-related disease. However, the urgency of these financial considerations is contingent on the extent to which policymakers perceive competitive foods as detrimental to children's dietary habits and believe that additional federal restrictions on such foods will reduce obesity risks.

ENDNOTES

1. Both the School Lunch and Breakfast Programs are permanently authorized. However, the reauthorization of related child nutrition programs (such as WIC, Summer Food Service Program, Child and Adult Care Food Program, and State Administrative Expenses) that occurs every five years has historically provided an opportunity to consider modifications to the school-based nutrition programs. A variety of topics directly related to the school meal programs (such as the criteria and processes used to determine eligibility for free and reduced-price meals, changes needed improve to the nutritional value of school meals, and concerns regarding the level of financial support provided for school meals) are under consideration. A companion National Health Policy Forum paper "No Free Lunch? Current Challenges Facing the National School Lunch and School Breakfast Programs" (Background Paper No. 72, December 11, 2009) provides an overview of the National School Lunch and Breakfast Programs and examines key concerns regarding the impact and operation of the school meal programs.

2. P.L. 108-265, Child Nutrition and Women, Infants, and Children Reauthorization Act of 2004, Section 204.

3. U.S. Department of Agriculture (USDA), *School Nutrition Dietary Assessment Study III—Volume I: School Foodservice, School Food Environment, and Meals Offered and Served*, November 2007, p.94; available at www.fns.usda.gov/ORA/menu/Published/CNP/cnp.htm.

4. Institute of Medicine (IOM), *Nutrition Standards For Foods in Schools: Leading the Way Toward Healthier Youth* (Washington, DC: National Academies Press, April 2007) p. 92.

5. USDA, "Federal Costs of School Food Programs," data as of November 2, 2009; available at www.fns.usda.gov/pd/cncosts.htm.

6. Mary Kay Fox *et al*., "Availability and Consumption of Competitive Foods in US Public Schools," *Journal of the American Dietetic Association*, 109, no. 2, suppl. 1 (February 2009): p. S62.

7. USDA, *School Nutrition Dietary Assessment Study III—Volume II: Student Participation and Dietary Intake*, November 2007, p. 196 and 199; available at www.fns.usda.gov/ORA/menu/Published/CNP/cnp.htm.

8. Fox *et al*., "Availability and Consumption of Competitive Foods in US Public Schools," p. S63.

9. Robert Wood Johnson Foundation (RWJF), "Study Singles Out Overeating as Primary Cause of U.S. Obesity Epidemic"; available at www.rwjf.org/childhoodobesity/digest.jsp?id=10649.

10. RWJF, "Study Singles Out Overeating as Primary Cause of U.S. Obesity Epidemic."

11. Patricia M. Anderson and Kristen F. Butcher, "Childhood Obesity: Trends and Potential Causes," *The Future of Children*, 16, No. 1 (Spring 2006): pp. 19–45.

12. Mary Story, "The Third School Nutrition Dietary Assessment Study: Findings and Policy Implications for Improving the Health of US Children," *Journal of the American Dietetic Association*, 109, no. 2, suppl. 1 (February 2009): p. S11.

13. School-age children consume an average of 527 calories of low-nutrient/energy-dense food per day. About 17 percent of these calories appear to come from competitive foods sold in school. Story, "The Third School Nutrition Dietary Assessment Study," p. S11.

14. USDA, "Foods Sold in Competition with USDA School Meal Programs: A Report to Congress," January 12, 2001; available at www.fns.usda.gov/cnd/lunch/_private/competitivefoods/report_congress.htm.

15. Fox *et al*., "Availability and Consumption of Competitive Foods in US Public Schools," p. S65.

16. USDA, *School Nutrition Dietary Assessment Study III*, pp. 196 and 205.

17. USDA, *School Nutrition Dietary Assessment Study III*, p. 201.

18. Ellen Fried and Michelle Simon, "The Competitive Food Conundrum: Can Government Regulations Improve Food?" *Duke Law Journa*l, 56 (2007): pp. 1491–1539.

19. IOM, *Nutrition Standards For Foods in Schools*, pp. 1–2.

20. School Nutrition Association (SNA), "From Cupcakes to Carrots: Local Wellness Policies One Year Later," September 2007, pp. 7–8; available at www.schoolnutrition.org/uploadedFiles_old/ASFSA/newsroom/pressreleases/From_Cupcakes_to_Carrots.pdf.

21. California, Connecticut, Hawaii, Illinois, Kentucky, New Jersey, Oregon, Rhode Island, Tennessee, Texas, and West Virginia.

22. Centers for Disease Control and Prevention, "SHPPS 2006: School Health Policies and Programs Study"; available at www.cdc.gov/Features/SchoolHealth/.

23. American Beverage Association, "School Beverage Guidelines Progress Report 2007-2008," September 10, 2008; available at http://schoolbeverages.com/download.aspx?id=111.

24. Some schools choose to eliminate competitive foods entirely, rather than ensure offerings complied with mandated standards.

25. Sarah E. Samuels *et al.*, "To What Extent Have High Schools in California Been Able to Implement State-Mandated Nutrition Standards?" *Journal of Adolescent Health*, 45, no. 3, suppl. (September 2009): pp. S38–S44.

26. SNA, "Heats On: School Meals Under Financial Pressure," September 2008; available at www.schoolnutrition.org/uploadedFiles/School_Nutrition/101_News/MediaCenter/PressReleases/Press_Release_Articles/Press_Releases/HeatsOn(1).pdf.

27. USDA, Centers for Disease Control and Prevention, U.S. Department of Health and Human Services, and U.S. Department of Education, "Approach 4: Adopt Marketing Techniques to Promote Healthful Choices" in *Making It Happen! School Nutrition Success Stories*, FNS-374, January 2005, pp. 113–118; available at http://teamnutrition.usda.gov/Resources/k_app4.pdf.

28. Providing more time at meals encourages children to wait in the full-service meal line and consume all meal items selected. Adequate seating facilitates meal consumption and discourages a "grab and go" approach to eating. Scheduling meals after recess can also ensure that children arrive hungry and receptive to healthy food choices.

29. USDA, *School Nutrition Dietary Assessment Study III—Volume I*, p. 81.

30. Samuels *et al.*, "To What Extent Have High Schools in California Been Able to Implement State-Mandated Nutrition Standards?"

31. IOM, *Nutrition Standards For Foods in Schools*, p. 92.

32. IOM, *Nutrition Standards For Foods in Schools*, p. 95

33. USDA, Food and Nutrition Service, *School Lunch and Breakfast Cost Study-II, Final Report*, CN-08-MCII, April 2008, p. 6-1; available at www.fns.usda.gov/ORA/menu/Published/CNP/FILES/MealCostStudy.pdf.

34. USDA, *School Lunch and Breakfast Cost Study-II*, p. D-41.

35. USDA, *School Lunch and Breakfast Cost Study-II*, p. 6-7.

36. IOM, *Nutrition Standards For Foods in Schools*, pp. 96–97.